

AMENDED CLAIMS

[received by the International Office on 31 October 2000 (31/10/00);
original claims 1-13 replaced by new claims 1-15; (3 pages)]

1. A coating mixture with anticorrosive properties, comprising a polymeric organic binder, a low-molecular liquid compound to be subjected to free-radical polymerization, a compound forming radicals under the influence of actinic radiation, and a conductive inorganic pigment, from the group including oxides, phosphates and phosphides of iron and aluminum and graphite-mica pigments.
2. The mixture as claimed in claim 1, characterized in that the conductive inorganic pigment is magnetizable iron oxide or iron phosphide or a combination of these two pigments.
3. The mixture as claimed in claim 1 or 2, characterized in that the binder is present in an amount of 15 to 60, preferably 20 to 50, in particular 20 to 40 % by weight,
the polymerizable compound is present in an amount of 24 to 60, preferably 20 to 55, in particular 25 to 50 % by weight,
the pigment is present in an amount of 10 to 40, preferably 10 to 35, in particular 12 to 35 % by weight,
and the photoinitiator is present in an amount of 5 to 30, preferably 8 to 25, in particular 8 to 20 % by weight, as well as further additives are present in an amount of 0.1 to 5, preferably 0.3 to 4, particularly preferably 0.4 to 3 % by weight.
4. The mixture as claimed in any of claims 1 to 3, characterized in that it is free of organic solvents and water.
5. The mixture as claimed in any of claims 1 to 4, characterized in that the binder itself still contains polymerizable groups
6. The mixture as claimed in any of claims 1 to 5, characterized in that the binder is selected from the group including condensation resins, epoxy res-

ins, poly(meth)acrylates, polyurethanes, polyesters and polyethers, preferably epoxidized novolaks, bisphenol epichlorohydrin condensation products and esterification products of these resins or polymers with (meth)acrylic acid.

7. The mixture as claimed in any of claims 1 to 6, characterized in that the compound to be subjected to free-radical polymerization is a mixture of compounds, at least part of which contains more than one polymerizable group in the molecule or completely consists of the same.
8. The mixture as claimed in claim 7, characterized in that the compound to be subjected to free-radical polymerization is an ester of an α,β -unsaturated carboxylic acid, preferably acrylic or methacrylic acid, with a divalent or polyvalent monomeric or oligomeric alcohol.
9. The mixture as claimed in claim 8, characterized in that the compound to be subjected to free-radical polymerization is selected from the group including dipropylene and tripropylene glycol di(meth)acrylate, 2-acetoacetyloxy ethyl methacrylate, hexanediol diacrylate, hydroxypropyl methacrylate, hydroxyethyl methacrylate and trimethylolpropane triacrylate.
10. The mixture as claimed in any of claims 1 to 9, characterized in that the compound forming radicals upon irradiation is an aromatic keto compound.
11. A method of applying a slidable anticorrosive layer to a metallic substrate, characterized in that a mixture as claimed in any of claims 1 to 10 is applied to the surface of a metallic substrate and the coating applied is irradiated with actinic radiation of such an intensity and for such a period that a firm, hard, tough, corrosion-resistant layer is formed.
12. The method as claimed in claim 11, characterized in that the coating mixture is applied to obtain a layer thickness of 2 to 8 μm , preferably 3 to 7 μm .
13. The method as claimed in claim 11 or 12, characterized in that the substrate to be coated is a steel sheet which has previously been zinc-coated and/or chromated or has been pretreated free of chromate.

14. The method as claimed in any of claims 10 to 13, characterized in that coating and curing are effected continuously one after the other in one step and the layer cured by radiation is possibly postcured thermally.
15. A flexible metal sheet which is electrolytically zinc-coated or hot-dip coated and/or chromated or pretreated free of chromate and has an organic layer applied thereto, which layer can be obtained by the method as claimed in any of claims 11 to 14.